

UNITED NATIONS DEVELOPMENT PROGRAMME



UNDP

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DP/PROJECTS/2683

(IND/79/004)

1 August 1980

ENGLISH ONLY

APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF THE GOVERNMENT OF INDIA

Establishment of Primary and Transfer Pressure Standards (IND/79/004)

Report of the Administrator*

Date of present approval:	February 1980
Starting date of project activities:	July 1980 (planned)
Planned completion date:	December 1983
To be executed by:	United Nations Industrial Development Organization (UNIDO)
Government implementing agency:	National Physical Laboratory (NPL) (Council of Scientific and Industrial Research)
Estimated cost of assistance planned under present approval:	\$ 274 600
Source of UNDP Financing:	Indicative Planning Figure (IPF)

I. Background

1. High pressure techniques are extensively used in diverse fields of science and engineering. They have found a significant application in the synthesis of superhard abrasives, the latter being of vital significance in the machine tool industry and in the production of super-conducting materials for the power generation and distribution and the chemical and petro-chemical industries. The accurate measurement of high pressures and the calibration of pressure measuring devices against pressure standards have been the main problems in the satisfactory utilization of these techniques.

*In accordance with General Assembly resolution 2689 (XXV) and subsequent authorizations of the UNDP Governing Council, reports are issued seriatim on the approval of UNDP assistance of \$ 250,000 or more (including, if any, assistance financed by Government or by third-party cost sharing).

2. A preliminary survey indicates that India has at least 3000 pressure gauges of different ranges which require calibration every year: moreover, the demand for such services is growing rapidly under the industrial development programme of the Government. The National Physical Laboratory, New Delhi, has the statutory obligation of maintaining primary and derived standards of physical measurements in India. It is felt, however, that the Laboratory has to be further strengthened in this area in order to fulfil its role effectively.

3. The project proposes to satisfy the urgent need of Indian industry for pressure standardization and calibration by setting up the necessary facilities at the National Physical Laboratory. These facilities will also help to advance the work in hydrostatic extrusion and material synthesis currently being undertaken by the Laboratory with UNDP assistance 1/. Under the project (IND/79/005), UNDP is providing assistance in the establishment of vacuum standards.

II. Objectives and activities

4. The objectives of the project are to: (a) establish pressure standards and facilities for the calibration of high pressure measuring instruments; and (b) improve the quality of instruments manufactured in India. Activities include the establishment of primary and transfer pressure standards up to 10K bar, the calibration of pressure gauges up to 40 bars, and the training of staff.

III. Inputs

5. UNDP will provide, through the Executing Agency, experts, training fellowships and study tours, and various types of high pressure measurement equipment.

6. The Government of India will provide qualified personnel, buildings and supplies and equipment, including gauges and measuring and tool room equipment.

IV. Financial data

7. The expenditure components of the planned assistance are as follows:

	<u>\$</u>
Personnel	20 400
Training	27 200
Equipment	220 000
Miscellaneous	7 000
	<u>274 600</u>

8. The estimated total value, expressed in US dollars, of the inputs provided directly by the Government to the project is \$217,250 in kind.

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